

WHAT IS CLAIMED IS:

1. In an airhandling unit for an HVAC system, a combination comprising a cabinet including an air inlet opening and an air discharge opening, a centrifugal, motor driven airhandling blower disposed in said cabinet, said
5 blower including a blower housing having opposed sidewalls, portions of which extend axially with respect to an axis of rotation of an impeller of said blower in opposite directions toward opposed walls of said cabinet providing a flow path for air flowing into said cabinet and into at
10 least one air inlet opening of said blower and providing for distribution of airflow entering said inlet opening of said blower with respect to said axis along flow streamlines which extend to said inlet opening over at least a major portion of said inlet opening.

2. The invention set forth in Claim 1 wherein:

said cabinet is substantially rectangular in shape and includes opposed sidewalls disposed adjacent and spaced from said opposed sidewalls of said blower housing,
5 respectively, and said cabinet includes at least one wall extending transversely to said sidewalls of said cabinet and disposed directly adjacent a portion of an end wall of said blower housing.

3. The invention set forth in Claim 1 wherein:

said blower includes an air discharge opening formed by said blower housing and oriented for discharging air from said blower toward an air discharge opening of said
5 cabinet.

4. The invention set forth in Claim 1 wherein:
said cabinet includes a heat exchanger disposed
directly adjacent a portion of an end wall of said blower
housing whereby at least one axially extending portion of
5 each of said sidewalls of said blower housing is disposed
adjacent said heat exchanger and such as to force airflow
toward opposed inlet openings in said blower housing to be
diverted around said at least one axially extending portion
of each of said sidewalls of said blower housing,
10 respectively.

5. The invention set forth in Claim 4 including:
at least one axially extending portion of each of
said sidewalls of said blower housing disposed directly
adjacent a wall of said cabinet.

6. The invention set forth in Claim 1 wherein:
each of said sidewalls of said blower housing
includes at least one axially extending portion configured
in combination with an end wall of said blower housing to
5 provide a substantially continuously increasing cross-
sectional flow area for throughput air of said blower
housing, said axially extending sidewall portions being
disposed adjacent an end wall portion of said blower
housing.

7. The invention set forth in Claim 6 wherein:
said blower housing includes at least three
circumferentially spaced axially extending portions of said
sidewalls of said blower housing, respectively, and disposed
5 adjacent corresponding portions of said end wall of said
blower housing.

8. The invention set forth in Claim 1 wherein:
said blower housing is formed of two opposed housing parts joined along a parting line which is substantially normal to said axis.

9. The invention set forth in Claim 8 wherein:
said housing parts are releasably connected to each other by spaced apart clips, said clips being cooperable with bosses formed on said housing parts,
5 respectively, for securing said housing parts to each other.

10. The invention set forth in Claim 1 wherein:
said blower is supported in said cabinet on opposed rails, said rails cooperating with a flange formed on said blower for suspending said blower in said cabinet.

11. In an airhandling unit for an HVAC system, a combination comprising a cabinet including an air inlet opening and an air discharge opening, a centrifugal, motor driven airhandling blower disposed in said cabinet, said
5 blower including a blower housing having opposed sidewalls, each having a generally circular air inlet opening formed therein, plural spaced apart portions of said blower housing sidewalls extending axially with respect to an axis of rotation of an impeller of said blower in opposite
10 directions toward opposed walls of said cabinet and providing a flow path for air flowing into said cabinet and into one of said air inlet openings of said blower which distributes airflow entering said at least one inlet opening of said blower with respect to said axis along flow
15 streamlines which extend over at least a major portion of said at least one inlet opening.

12. The invention set forth in Claim 11 wherein:

at least one axially extending portion of each of
said sidewalls of said blower housing is disposed directly
5 adjacent a wall of said cabinet.

13. The invention set forth in Claim 11 wherein:

said axially extending portions of said sidewalls
of said blower housing are configured in combination with an
end wall of said blower housing to provide a substantially
5 continuously increasing cross-sectional flow area for
throughput air of said blower housing, and said axially
extending portions of said sidewalls of said blower housing
are disposed adjacent an end wall portion of said blower
housing disposed at a variable predetermined radial distance
10 from said axis.

14. The invention set forth in Claim 13 wherein:

said blower housing includes at least three
circumferentially spaced axially extending portions of said
sidewalls of said blower housing and disposed adjacent
5 corresponding portions of said end wall of said blower
housing which are disposed at variable predetermined radial
distances from said axis.

15. The invention set forth in Claim 1 wherein:

said blower housing is formed of two opposed
housing parts joined along a parting line which is
substantially normal to said axis.

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16. An HVAC apparatus including a combination comprising a generally rectangular cabinet including an air inlet opening and an air discharge opening, a centrifugal, motor driven airhandling blower disposed in said cabinet, 5 said blower including a blower housing having opposed sidewalls each having a blower air inlet opening formed therein, each of said blower housing sidewalls include circumferentially spaced apart portions which extend axially with respect to an axis of rotation of an impeller of said 10 blower in opposite directions toward opposed walls of said cabinet and providing a flow path for air flowing into said cabinet and into said air inlet openings of said blower whereby airflow entering said inlet openings of said blower housing is distributed over at least a major portion of said 15 air inlet openings of said blower housing, respectively.

17. The apparatus set forth in Claim 16 wherein:
at least one axially extending portion of each of said sidewalls of said blower housing is disposed directly adjacent a wall of said cabinet, and said axially extending 5 portions of said sidewalls are configured in combination with an end wall of said blower housing to provide a substantially continuously increasing cross-sectional flow area for throughput air of said blower housing.

18. The apparatus set forth in Claim 16 wherein:
said blower housing includes at least three circumferentially spaced axially extending portions of said sidewalls of said blower housing.

19. The apparatus set forth in Claim 16 wherein:
said blower housing is formed of two opposed
housing parts joined along a parting line which is
substantially normal to said axis.